



Tarleton State University
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Buffalo Creek

Recreational Use Attainability Analysis Overview

Texas Institute for Applied Environmental Research
Stephenville, Texas

April 17, 2013





Why are we here?

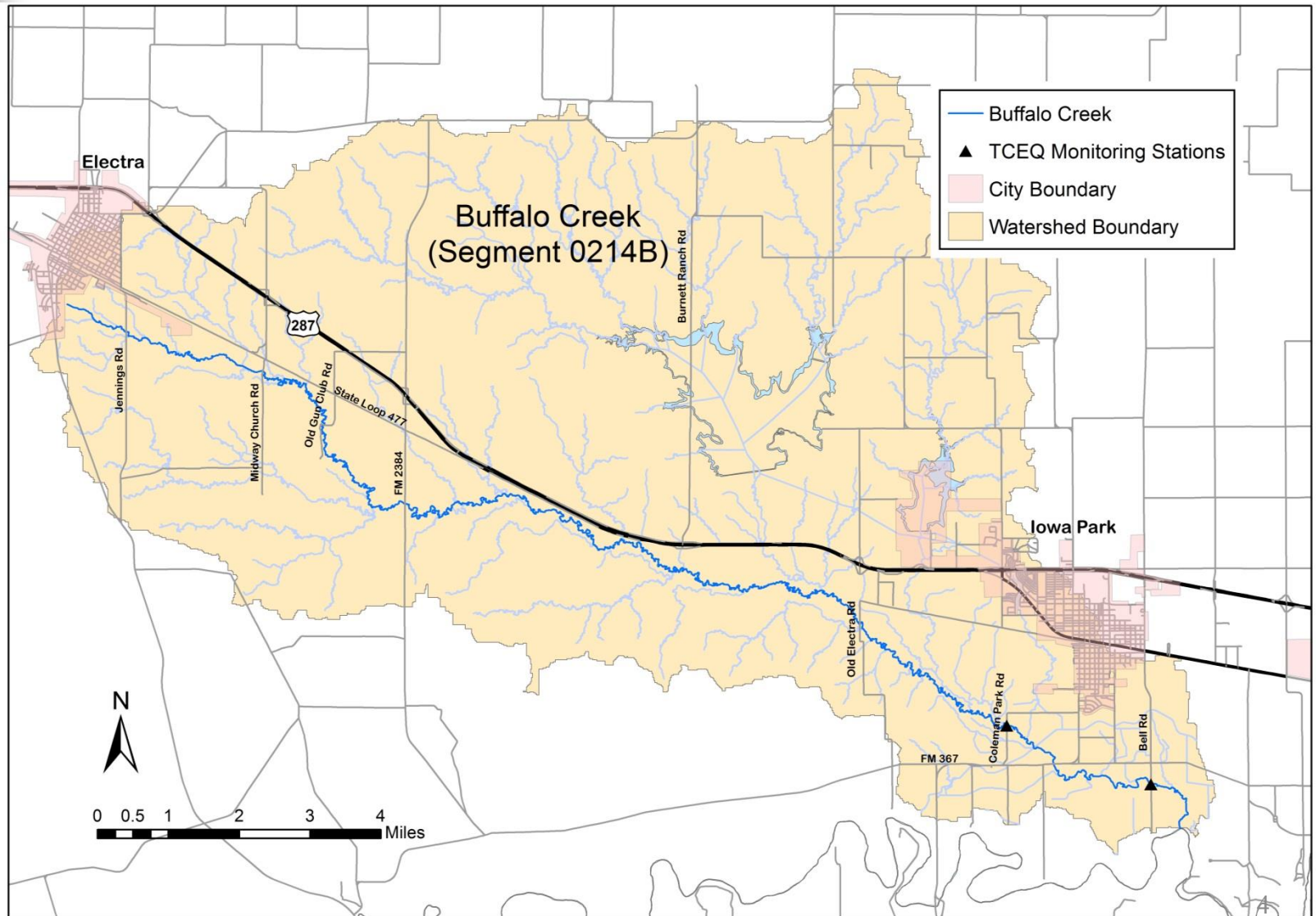
- Buffalo Creek listed as an impaired
 - 2010 Texas Water Quality 303(d) List
 - Impaired for primary recreation
 - Based on elevated bacteria concentrations



Why are we here?

- One potential way to get Buffalo Creek off the impaired list
 - Assess if the recreational standard is appropriate via a recreational use attainability analysis (RUAA)
 - Primary contact recreation presumed

Monitoring Locations for 303(d) List





RUAA Use Categories

- **Primary Contact Recreation**
 - Activities that are presumed to involve a significant risk of ingestion of water
 - **Swimming**
- **Secondary Contact Recreation 1**
 - Activities that commonly occur but have limited body contact incidental to shoreline activity
 - wading by adults, fishing, canoeing
 - activities are presumed to pose a less significant risk of water ingestion than primary contact recreation but more than secondary contact recreation 2.



RUAA Use Categories

- **Secondary Contact Recreation 2**
 - These activities occur less frequently than secondary contact recreation 1 due to physical characteristics of the water body or limited public access.
- **Noncontact Recreation**
 - Activities that do not involve a significant risk of water ingestion, such as those with limited body contact incidental to shoreline activity, including birding, hiking, and biking.



Purpose of RUAA

- To confirm primary contact recreation or provide information that might support changing the recreational use category of the river



Components of a RUAA

- **Historical Information Review** – to document past recreational uses
- **Interviews** – to obtain feedback on current and past recreational uses from stakeholders
- **Field Surveys** – to document current stream conditions and uses



RUAA Components

- Historical Information Review
 - November 28, 1975 – Present
- Looking for anything that documents recreational use of Buffalo Creek
- Newspaper clippings or other publications
 - Historical or Museum Records
 - Personnel pictures or letters
 - Etc.



RUAA Components

- Stakeholder Interviews – document use of Buffalo Creek from Individuals
 - Conducted During Field Surveys (if individuals are encountered)
 - Streamside landowners
 - Local residents
 - Other users

Interviews can be anonymous and conducted by phone or mail



Field Surveys

- What they entail:
 - Goal: 3 sites every 5 miles
 - At each site
 - 300 meter reach traversed
 - Document
 - Stream characteristics that may promote or hinder recreational use
 - Observations of direct use or signs of recreational use
 - Interviews with individuals



RUAA Field Surveys

- 2 Surveys during

Base Flow Conditions

1. Sustained typical dry warm-weather flow
2. Between rainfall events

Periods of Likely Use (May – Sept)

Air Temperature > 70°F

1. Spring Break
2. Weekends
3. Holiday
4. Summer



RUAA Field Surveys

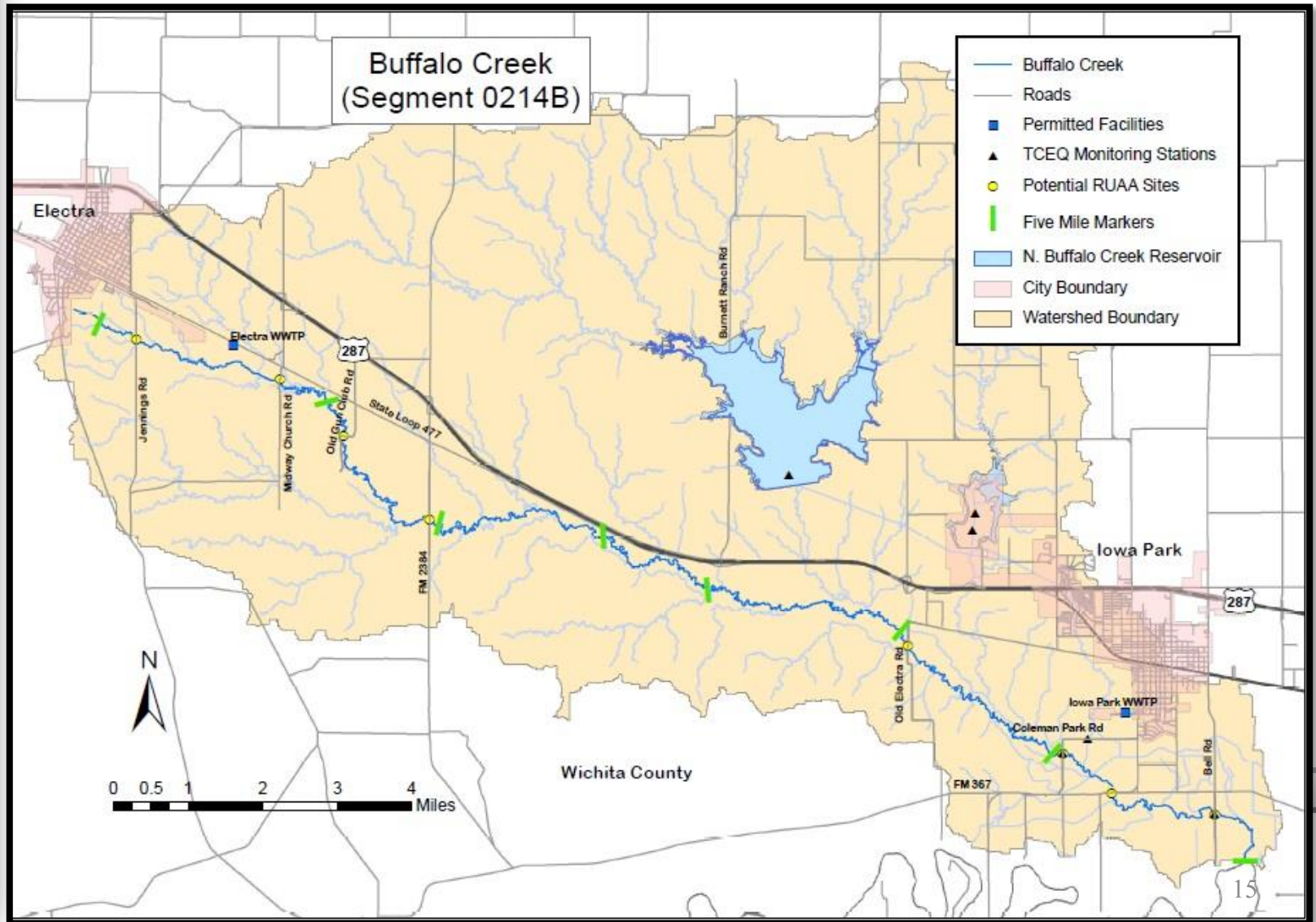
- Data Sheet Includes:
 - Stream characteristics
 - Current weather conditions & daily conditions for the previous month
 - Riparian zone, ease of bank access, dominant substrate
 - Document recreation observed (if any)
 - Stream and pool measurements



RUAA Components

- Field Surveys also Include
 - Photographic Record (Each Site)
 - Upstream
 - Left Bank
 - Right Bank
 - Downstream
 - At 30, 150, 300 M.

Proposed Survey Sites





Site Selection for RUAA

- Currently proposed sites represent public road crossings, many of which are fenced
- Seeking Landowner permission to access points above and below road crossing and additional points on the river
- Need Stakeholder input on
 - site selection and additional sites



Proposed RUAA Survey Sites

Site Description
Buffalo Creek at Bell Rd south of Iowa Park
Buffalo Creek at FM 368 south of Iowa Park
Buffalo Creek at Coleman Park Rd south of Iowa Park
Buffalo Creek at Old Electra Rd southwest of Iowa Park
Buffalo Creek at FM 2384
Buffalo Creek at Midway Church Rd southeast of Electra WWTP
Buffalo Creek at Jennings St southeast of Electra



RUAA Site Selection Guidelines

- Identify areas where the water body is
 - accessible to the public
 - has a high potential for recreational use
 - Road crossings
 - Public lands
 - Parks
 - Populated areas
- Characterize the full river reach



RUAA Site Selection Guidelines

- Goal for RUAA Survey
 - 3 sites per every 5 miles of stream
- Buffalo Creek about 33.7 river miles long
 - Goal: 21 sites



Time Frame

- Proposed Field Survey Dates
 - June 3-8, 2013
 - August 5-10, 2013



Questions on RUAA Overview?

Project Website:

<http://www.tsswcb.texas.gov/en/node/1781>

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